

A PALEONTOLOGICAL PILGRIMAGE THROUGH PHILADELPHIA, THE BIRTHPLACE OF AMERICAN PALEONTOLOGY

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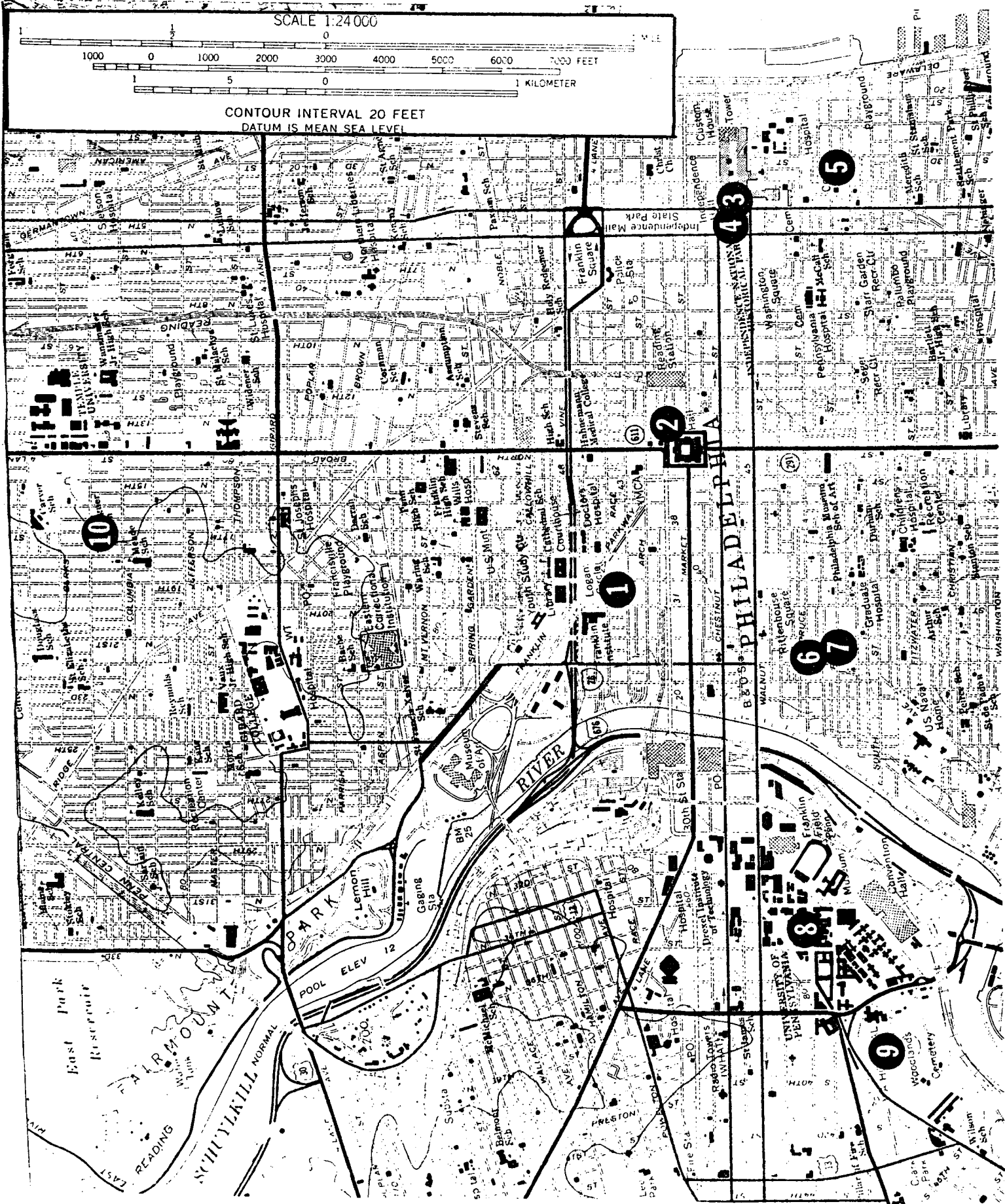
Abstract

Ten Philadelphia sites are visited on a field trip to places of paleontological history: The Academy of Natural Sciences, the site of a Joseph Leidy residence, the American Philosophical Society, Independence Hall (second site of the Peale Museum), St. Peter's Church and grave of Charles Willson Peale, Joseph Leidy's last home, Edward Drinker Cope's house, the University of Pennsylvania, the grave of Ferdinand Vandever Hayden, and the Wagner Free Institute of Science.

Introduction

Philadelphia not only is the birthplace of a nation, but the birthplace of American paleontology. During the late Eighteenth and early Nineteenth Centuries, this city was the cultural capital of the New World, and here many scientific, educational, and fine arts institutions were founded. The sites selected for this paleontological pilgrimage include the homes, graves, and museums of some of the most well-known paleontologists and promoters of paleontology.

Center City is fortunately laid out mostly as a grid of equally-spaced streets, generally aligned to the cardinal directions. However, one-way streets are the rule; old carriageways and alleys (many of them residential streets) bisect, trisect, and criss-cross many blocks; and parking spaces are about as rare as specimens of *Archaeopteryx*. Drivers new to Philadelphia might find this trip an interesting experience!



For those who are so inclined, parts of this trip can be made on foot, walking through some of Philadelphia's more lovely and historical neighborhoods. The Center City tour (Stops 1 through 7), can be done leisurely in about 2-1/2 hours. The "grand tour," which adds the West Philadelphia segment to the Center City tour, can be done in about 3 to 4 hours. To connect the Center City and West Philadelphia segments, head south from the Cope house to Lombard Street, west to 27th Street, south to South Street, and over the Schuylkill River on the South Street bridge. South Street feeds into Spruce Street at 33rd Street; a detour can be made here to see Hayden Hall (Department of Geology, University of Pennsylvania). Head west on Spruce to 38th Street, south one block, then bear diagonally southwest across the intersection of Baltimore, Woodland, and University Avenues. The Woodlands Cemetery is the scenic park area ahead and to the left.

Those who walk this tour and visit Hayden's grave (Stop 9) may elect to return to Center City by public transportation. Upon leaving the cemetery, directly across the street is a car stop for trolleys entering the subway to Center City. Any trolley going in that direction can be boarded. In Center City, stops are made only along Market Street, at 22nd, 19th, 15th, and 13th Streets. To go on to Stop 10, the Wagner Free Institute of Science, via public transportation, take the trolley to 30th Street, where free connection can be made with the Market-Frankford line; follow the signs for Frankford-bound trains. Get off at 15th Street, where free connection can be made with the Broad Street subway; follow the signs for Fern Rock-bound trains. Follow the directions given in the next paragraph.

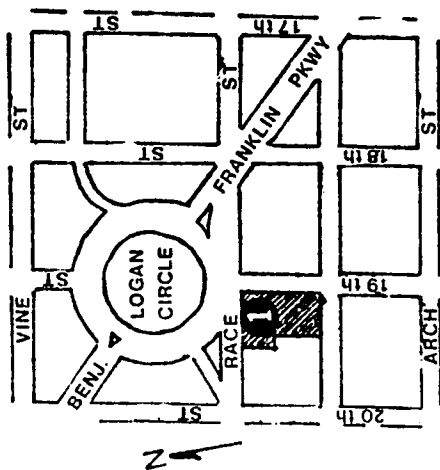
Stop 10, the Wagner Free Institute, is somewhat north of Center City, in a less-inviting neighborhood, and is not recommended as part of the walking tour. To reach the Wagner Free Institute of Science, at 17th Street and Montgomery Avenue, travel north on Broad Street 1.9 mi (3 km) to Montgomery. Seventeenth Street is three numbered streets to the west. (Note: Do not travel north on any of the numbered streets; many are not continuous toward North Philadelphia.) To reach the Wagner Free Institute by public transportation, take the Broad Street subway northbound (toward Fern Rock) to the Columbia-Temple University stop; walk one block north to Montgomery and three blocks west to 17th. Surface transportation can be had via the Route C bus on Broad Street; get off at Montgomery (two preceding blocks are Oxford and Columbia Avenues).

Field Trip

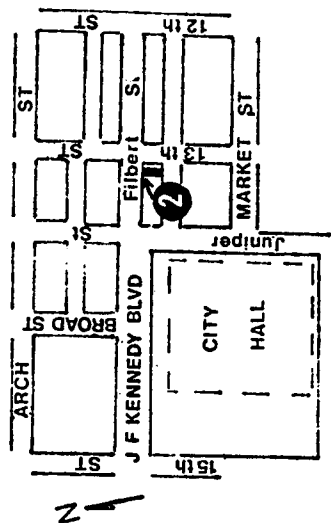
1 The Academy of Natural Sciences of Philadelphia, southwest corner of 19th & Race Streets, on the Benjamin Franklin Parkway.

The Academy of Natural Sciences was founded in 1812 and is one of the oldest continuously operating museums in America. Its scientific collections are world-renowned, and the paleontological collections, though small in comparison to the holdings in other notable museums, include many historically important specimens. It is impossible to single out specific items as being more important than others, but perhaps the most well-recognized of the Academy specimens is the premiere specimen of American dinosaur paleontology, the type of *Hadrosaurus foulkii* Leidy, 1858. This duck-billed dinosaur was the first reasonably complete dinosaur skeleton found anywhere in the world, from nearby Haddonfield, New Jersey, and it gave Leidy the evidence for bipedalism in dinosaurs. It is on display prominently at the entrance to the Academy's new Discovering Dinosaurs exhibit. Also on exhibit here is the type specimen of the extinct sloth, *Megalonyx jeffersonii* Desmarest, 1822, a specimen collected by Capt. Meriwether Lewis in Pleistocene

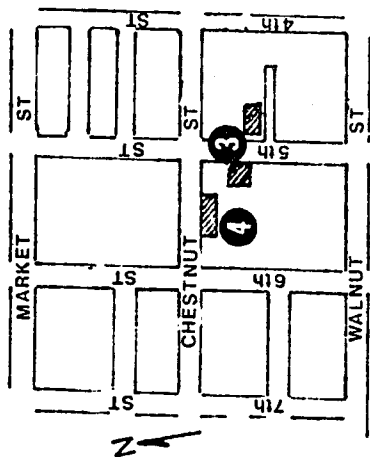
Figure 1. Area map showing field trip stops. Base map is USGS Philadelphia, Pa.-N.J. 7-1/2' quadrangle. See Figure 2 for detail maps and names of sites.



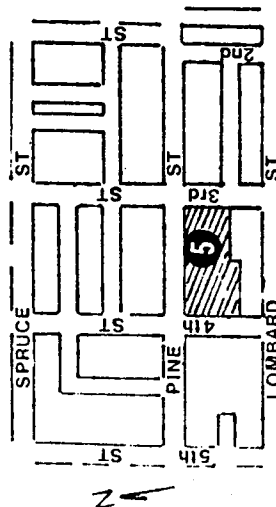
Academy of Natural Sciences of Philadelphia, 19th & Race Sts.



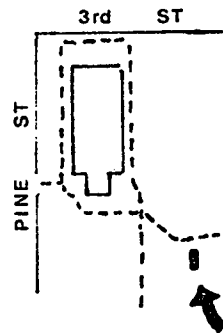
Joseph Leidy residence (site), 1302 Filbert St.



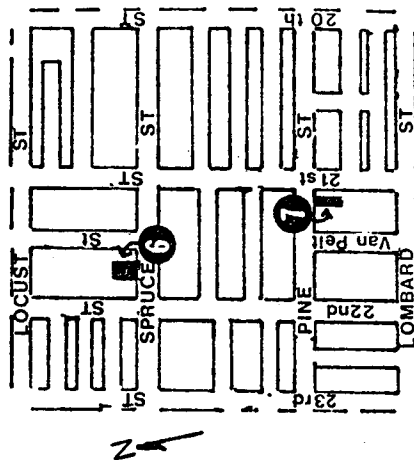
American Philosophical Society, 104 & 105 S. 5th St. (3); Independence Hall (4).



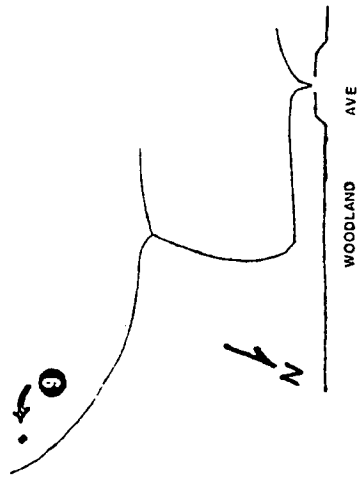
St. Peter's Church, 3rd & Pine Sts.



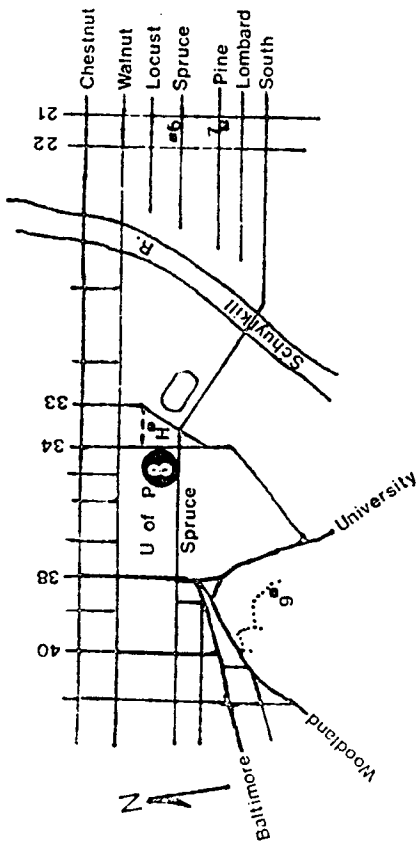
Charles Willson Peale grave, St. Peter's church yard.



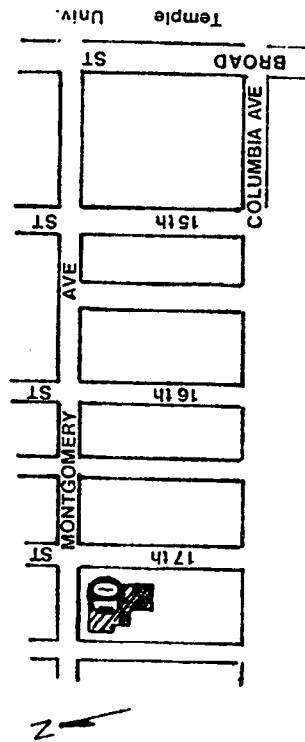
Joseph Leidy house, 2123-2125 Spruce St. (6); Edward Drinker Cope house, 2102 Pine St. (7).



F. V. Hayden grave, Woodlands Cemetery, 40th St. & Woodland Ave.



Generalized map showing Stops 6-9; including University of Pennsylvania (8), and Ferdinand Vandever Hayden grave (9). H is Hayden Hall (Geology), on the Penn campus.



Wagner Free Institute of Science, 17th St. & Montgomery Ave.

Figure 2. Detail maps showing field trip stops. Numbers correspond to stop numbers in the field trip.

cave deposits in West Virginia and first described by Thomas Jefferson (1799; see also Wistar, 1799, and Gillette & Colbert, 1976). (Catalogues of type fossils in the Academy are listed at the end of this guide.)

Standing in front of the Academy is a statue of Joseph Leidy, in whose hand is the reproduced jaw of the Pleistocene felid, *Felis atrox* Leidy, 1853 (*fide* D. Baird), from near Natchez, Mississippi. The type specimen is in the Academy's collections.

[See also the articles "Paleontology, biostratigraphy, and depositional environments of the Cretaceous-Tertiary transition in the New Jersey Coastal Plain," by W. B. Gallagher, D. C. Parris, and E. E. Spamer, and "Hawkins' hadrosaurs: The stereographic record," by R. C. Ryder, in this issue of *The Mosasaur*.—Ed.]

2

Joseph Leidy residence (site), 1302 Filbert Street.

This Leidy residence is no longer standing. He lived here before moving to his Spruce Street residence. The City Hall Annex (1926) now stands here, and the 1302 plot would be one door from the southwest corner of 13th and Filbert, approximately at the first curved archway.

3

American Philosophical Society, 104 & 105 South 5th Street.

The American Philosophical Society was founded by Benjamin Franklin in 1743, an outgrowth of the Junto (1727); it was reorganized under its present name in 1769 and was "The first learned society in the British Plantations in America" (plaque on Philosophical Hall).

Philosophical Hall, on the west side of South 5th Street, behind Old City Hall, was erected 1786-1789. It was in this hall, on March 10, 1797, that Thomas Jefferson lectured on a new genus of extinct animal, *Megalonyx* (Jefferson, 1799; Wistar, 1799). About Jefferson's presentation, Kurtén & Anderson (1980, p. 137) noted:

"Jefferson's talk to the American Philosophical Society . . . marked the beginning of vertebrate paleontology in North America"

Jefferson's specimen, the type of *M. jeffersonii* Desmarest, 1822, is on display in the Academy of Natural Sciences. Jefferson, a man of many cultural pursuits, included paleontology amongst his interests. His collection of fossils was deposited in the American Philosophical Society and later donated to the Academy of Natural Sciences.

Also in this building, the eminent artist Charles Willson Peale assembled his Peale Museum, a feat negotiated by Dr. Caspar Wistar, curator of the American Philosophical Society. This "museum of natural curiosities" was "a continual showplace for his skills as an artist" and "a splendid training place for his [artist] sons" (Howard, 1975, p. 42). Peale's animated reconstructions of animals and assembled skeletons were both innovative and crowd-drawing. The museum also was the first such natural history museum in the new United States. Perhaps the best-known of the Peale Museum specimens were the mastodon (*Mammut*) skeletons he mounted, which were incorrectly called "mammoths." Much of Peale's technical work was performed by Moses Williams, a black who had the honor of being the first museum technician in this country. The Peale "mammoths" were eventually sold, and one survives today in Darmstadt, West Germany.

In 1801, Peale was alerted by a colleague in New York State that mastodon bones had been found, and he travelled to the Wallkill site to stay with one Dr. Graham, whose residence was on the banks of the Wallkill. Two years earlier, the bones of another mastodon had been found in a marl pit near Newburgh, New York, 67 miles north of New York City on the Hudson River, and Peale came into this specimen as well. Such popular interest was aroused by the mastodons that one of Peale's sons, Rembrandt, wrote a book about the Wallkill discovery, with a description of the bones, which at that time were thought to be those of a carnivore (Peale, 1803). When the jaw of the Wallkill mastodon was unearthed, Peale related (1803, p. 33),

"... the unconscious woods echoed with repeated huzzas, which could not have been more animated if every tree had participated in the joy. 'Gracious God, what a jaw! how many animals have been crushed between it!' was the exclamation of all: a fresh supply of grog went round, and the hearty fellows, covered with mud, continued the search with encreasing vigour."

Across the street from Philosophical Hall is Library Hall, the library of the American Philosophical Society. An engraved stone reads, "This building authorized by an act of Congress of 1952, is on the site occupied from 1789 to 1884 by the Hall of the Library Company of Philadelphia whose facade it reproduces. Cornerstone laid April 25, 1958." The original building was designed by William Thornton, a physician with no architectural training who also later designed the U.S. Capitol. The statue atop the library doorway is an interesting classical portrayal of Benjamin Franklin in a toga, beneath which is the inscription, "B. Franklin. Replica of the statue by [François] Lazzarini presented to the Library Company 1792 by William Bingham." The original, badly eroded by the acid rain of the Industrial Revolution, is now in the Library Company of Philadelphia, 1314 Locust Street. Library Hall is the repository for many historical documents and collections, including notes by Charles Willson Peale on the Wallkill Mammoth excavation. Other treasures here include first editions of Newton's *Principia*, Franklin's *Experiments and Observations*, and Darwin's *Origin of Species*; a manuscript copy of the Declaration of Independence in Jefferson's own hand, and two early broadsides of this document; and Lewis and Clark's journals.

4 Independence Hall, central north side of Independence Square, between 5th & 6th Streets and Chestnut & Walnut Streets.

In 1802, the Peale Museum was moved to the second floor of Independence Hall (then called the State House). The second-story windows in the rear of the building, facing Chestnut Street, belong to the long room in which the museum was installed. The famous painting by Charles Willson Peale, "The Artist in His Museum" (1822), wherein he is holding aside a heavy drapery to show the museum room beyond, depicts the museum in Independence Hall (although apparently with some considerable artistic license). The jaw fragment of Peale's famous "mammoth," shown on the floor in the lower right of the painting, was really part of the mount and behind the viewer, in a separate room to the left.

Before the New York mastodon specimens were discovered, only fragmentary portions of mastodons had been found, "the extraordinary remains of the *great American Incognitum*" (Peale, 1803, p. 15). Peale continued (pp. 15-16),

"... the world is now in possession of two undisputed skeletons of this animal, found in such situations as leave no room for conjecture; each skeleton being dug up in a separate place, without any intermixture of foreign bones, and each bone exactly adapted to its corresponding points of articulation. One of these skeletons is

erected, as a permanent specimen, at my father's museum, in Philadelphia, where it will remain a monument, not only of stupendous creation, and some wonderful revolution in nature, but of the scientific zeal, and indefatigable perseverance, of a man from whose private exertions a museum has been founded, surpassed by few in Europe, and likely to become a national establishment, on the most liberal plan. The other skeleton, discovered a few miles distant from the former, I have brought with me to Europe."

5 Charles Willson Peale grave, St. Peter's Church, south side of Pine Street, between 3rd & 4th Streets.

St. Peter's Church (Episcopal) is a Georgian-style building constructed between 1758 and 1763; it was used for worship beginning in 1761. Designed by Robert Smith and John Kearsley, St. Peter's was built on land given by Thomas and Richard Penn, heirs of Philadelphia founder William Penn. The tower, added in 1842, was planned by William Strickland, who designed the present steeple atop Independence Hall. George Washington at one time worshipped at St. Peter's (pew 41).

To reach the Peale grave, enter the church yard from Pine Street, bear right, and follow the path around the tower. At the intersection, continue straight across and follow the path to the right. Peale's grave is after the next turn in the path, on the right. The grave marker, in white marble, reads:

Charles Willson Peale

Born April 16, A.D. 1741—Died Feb. 22, A.D. 1827
He participated in the Revolutionary struggle for our independence.
As an artist contributed to the history of his country.
Was an energetic citizen and patriot, and in private life
beloved by all who knew him.

His second wife, Elizabeth DePeyster (d. Feb. 19, 1804) is also buried here.

6 Joseph Leidy House, 2123-2125 Spruce Street.

This spacious row home was Joseph Leidy's residence during his later life, and it was here that he died in 1891. Of inlaid brick construction, it contains three stories and an attic. The two-plot width of this house, the arched doorway, interior foyer ascending to the house door, and the arched second-story windows lend a distinctive air of affluence to this home, standing out from the brickface and brownstone houses in the neighborhood. The doorsill appears to be of later construction, and the ironwork balcony above the doorway may or may not have been in place when Leidy lived here. Note the cellar entrance to the right of the doorway. The attics atop this and four adjacent houses may have been added at a later time because they all are of the same construction and materials. This house's long survival as a single-family home, in a neighborhood of homes converted to apartments, is remarkable; but as of June, 1986, it was being converted into a multi-family dwelling of nine apartments.

[A house at 1319 Locust Street is also known as a "Leidy House," but this was built in 1895 for Dr. Joseph Leidy, Jr. Elevations and floorplans are in the Philadelphia Free Library (see in the card catalogue under "Philadelphia, 1319-1321 Locust Street").]

7

Edward Drinker Cope House, 2102 Pine Street.

Edward Drinker Cope, and many of his fossils, resided at this address. In fact, "The adjoining houses at 2100 and 2102 Pine Street . . . were the center of Cope's universe" (Osborn, 1931, p. 371). Cope leased out the 2100 address in 1885, and "the Copes moved into rooms just around the corner. The house at 2102 Pine Street, however, continued to serve as laboratory, study and museum, and as bedroom during the summers when he was in town" (p. 371). The entire house a working museum, Cope's study was on the second-floor rear, overlooking a quiet alleyway. These windows can be seen by walking around the corner onto 21st Street and looking over the fence. Osborn's (1931) biography of Cope contains a frontispiece which shows Cope in this room (Osborn's fig. 2), "Cope at his study table about the year 1895." The first floor was used for storage, the second floor front was filled with specimens from his Permian and Pampean collections, and the third floor rear "was the preparation room, presided over by the genial Jacob Geismar, who prepared Cope's fossils and made some of his most familiar mountings . . ." (p. 371).

The house, now converted to six apartments, is one of a nine-home row on the south side of Pine Street between 21st and Van Pelt Streets. The entire row contains three-story units with attics, and each unit shares a common facade of bluish-gray sandstone that stands out from the other homes in the area.

Cope died in this house on April 12, 1897. According to Cope's biographer and long-time professional and close friend, the eminent paleontologist Henry Fairfield Osborn, another colleague, Persifor Frazer, was with Cope several days before Cope's death, when Cope was in delirium (Osborn, 1931, p. 468). Dr. Frazer related that Cope "delivered in his delirium a lecture on the Felidae with all his charm of manner and diction and all his profound knowledge of the history of the subject, the discoveries up to date, and their relations to each other and to other great problems of zoology."

Osborn frequently travelled to 2102 from the American Museum of Natural History, in New York, to work with Cope. Osborn's (1931) lengthy Cope biography concludes with his last trip to 2102 (pp. 587-588):

"On the morning of April fifteenth, I ascended for the last time the steps of 2102 Pine Street and glanced into the room to the right of the entrance hall, full of large cases and bones of dinosaurs. On reaching the second floor, I found the coffin placed on Cope's two study tables and covered with a dark cloth, upon which lay a spray of white magnolia blossoms and green leaves. Chairs on each side of the coffin seated five of Cope's personal scientific friends and colleagues, among them Doctor Harrison Allen, Doctor Persifor Frazer, Doctor William Berryman Scott, Doctor Horatio C. Wood, and Professor William H. Collins. I took another seat facing the coffin and we all sat in perfect Quaker silence for what seemed an interminable length of time. There was no sound except from the slow migrations of a land tortoise from Florida, which had been one of the living pets of Cope's study from some time past. * * * But the most real reptilian memory and tribute was displayed in a glass vivarium not far from Cope's study table, in which a Gila monster, *Heloderma suspectum*, slowly circled the glass walls of his cage."

8

University of Pennsylvania

The University of Pennsylvania was founded by Benjamin Franklin in 1740. The Department of Geology was established in 1836 and is the oldest continuously functioning collegiate geology department in the country. Paleontology has long been one of the

strong points of the Department, and practitioners of vertebrate paleontology here included Joseph Leidy and Edward Cope—and, currently, Dr. Peter Dodson.

Leidy and Cope taught comparative anatomy here at Penn, all the while doing research in vertebrate paleontology both here and at the Academy of Natural Sciences. These men represented a transition in academia, as the last of their academic ilk. As Osborn (1924, p. 131) pointed out, "Leidy and Cope were the very last representatives in America of the older school of naturalists and anatomists, who covered a very broad field."

Several generations of paleontology students can trace their academic roots through Philadelphia. Beginning with Dr. Leidy, Cope can be included in the second generation of Leidy descendants. Some of today's practitioners and students of paleontology are sixth- and seventh-generation academic descendants of Dr. Leidy (Stephen Farrington, personal studies).

Cope himself remains in Penn's anthropology collections. A codicil to Cope's will, dated March 24, 1896, instructed the executors of his estate (Osborn, 1931, p. 590):

"I direct that after my funeral my body shall be presented to the Anthropometric Society, and that an autopsy shall be performed on it. My brain shall be preserved in their collection of brains, and my skeleton shall be preserved in their collection, in a locked case or drawer, and shall not be placed on exhibition, but shall be open to the inspection of students of anthropology. The remainder of my body, I direct, shall be burned and my ashes be preserved in the same place as shall contain the ashes of my esteemed friends, Dr. Jos. Leidy and Dr. Jno. A. Ryder."

The Department of Geology is in Hayden Hall, 233 South 33rd Street, on Smith Walk. Hayden Hall, the facade of which was restored in 1985–1986, was named for Ferdinand Vandever Hayden, who taught at Penn and who is probably most widely known for heading one of the four great Nineteenth-Century surveys of the American West, the "U.S. Geological and Geographical Survey of the Territories," more simply known as the Hayden Survey. When the Hayden Survey explored the Yellowstone region, the concept of the National Park evolved, and Hayden personally publicly lectured and lobbied in Congress to establish a world's first, the Yellowstone National Park. The paleontological collections made during the Hayden Survey, to which Cope was attached for several years, tremendously advanced the science of vertebrate paleontology. Cope's (1884) mammoth quarto volume on *The Vertebrata of the Tertiary Formations of the West* ("Cope's Bible") is a Hayden Survey production, as is Leidy's (1873) *Contributions to the Extinct Vertebrate Fauna of the Western Territories*.

In his last years, Hayden went on to work in the new U.S. Geological Survey; but advancing illness forced him to resign in December, 1886. These years may not have been as embittered as some historians have portrayed, and the end of Hayden's illustrious career came through illness rather than through ill feelings of politics (Nelson *et al.*, 1981). Just one year after leaving the USGS, he died in Philadelphia.

9

Ferdinand Vandever Hayden grave, Woodlands Cemetery, 40th Street & Woodland Avenue.

Hayden is buried near the Penn campus in one of the oldest and most beautiful cemeteries in Philadelphia. To reach his grave by car, one must bear right through the entrance of the cemetery and circumnavigate the grounds. On foot, bear left through the gate and follow the road around; it will turn right and ascend a hill. At the fork, bear

left, and continue along the road which gradually descends. About 100 m past the huge Evans obelisk and just after the downward change in slope, look for a cluster of trees on the right, including a red oak (*Quercus borealis*) (or, failing that, a distinctive Russian Orthodox gravestone inscribed in Russian). Straight back about 15 m from the road is Hayden's grave, marked by a gray granite Maltese cross with embedded circle, the most ornate of the gravestones in the Woodruff family plot (his wife's family); the cross face and inscription panel are polished. The inscription reads:

Ferdinand V. Hayden, M.D.

Died December 22, 1887.

Emma Woodruff

wife of

Ferdinand V. Hayden, M.D.

Died September 16, 1934

Fide et Amore

10

Wagner Free Institute of Science, 17th Street & Montgomery Avenue.

The Wagner Free Institute of Science is a museum virtually unchanged from its earliest days. In the Victorian tradition, most of its specimens are on display. The Institute was founded in 1852 by William Wagner, a Philadelphia merchant who travelled widely in the employ of Philadelphia mercantile magnate and banker Stephen Girard (1750-1831). During these times, Wagner "had the opportunity to visit foreign countries and, being interested in scientific pursuits, he made a study of scientific institutions abroad and collected natural history specimens which afterward formed the nucleus for the collections in the museum of the Institute" (Wagner Free Institute of Science). The present Greek Revival building here at 17th & Montgomery was completed in 1865 and immediately occupied by the Institute. After Wagner's death in 1885, management of the Institute was turned over to a Board of Trustees, which still administers the Wagner endowment. To this day, in accordance with Wagner's wishes (and, while he was alive, his practice), all the Institute's lectures, classes, and museum admission are free of charge. (Current museum hours are Tuesday-Friday 10-3, Sunday 12-3.)

The ground floor of the Wagner Free Institute contains its library and lecture rooms. The museum is in the spacious hall that occupies the whole second floor. Two galleries, not open to the public, overlook the exhibit hall from all four walls. A directory to the exhibits is on the wall at the top of the stairs.

The collections are remarkable, certainly one of Philadelphia's best-kept secrets, and yet open free to the public. The museum boasts fine comparative collections of modern animals, most from North America and Europe; but some rather exotic creatures, too. Insects and arachnids, arthropods, and molluscs of all kinds fill dozens of cases; amphibians, fish, reptiles, birds, and mammals occupy cases of osteological and taxidermy mounts. A few American Indian crafts and artifacts also can be seen. The walls of the museum hold large original Audubon colored lithographs, engraved in the 1840s, depicting a variety of animals and birds.

Collections of minerals, crystals, and fossils occupy one-half of the museum, watched over by a bust of Joseph Leidy, presented by Dr. Leidy himself. Fossils include invertebrates, vertebrates, plants, and trace fossils. Fossil invertebrates cram the cases, displayed in their trays with labels; many types are included amongst them. By all means, browse through the glass-topped drawers that are in every floor case; they contain still more material that can be easily overlooked.

Particularly noticeable fossil displays are the mastodon (*Mammot*) bones, from Marshalls Creek, Pennsylvania, and ichthyosaurs and ammonites from Lyme Regis, England (Jurassic). The mastodon consists of the legs and ribs of the right side of a young individual; the left half is in the William Penn Memorial Museum, Harrisburg. The skull, tusk, and lower jaw, all of an adult, are on loan from the Academy of Natural Sciences. The Lyme Regis material was collected by Wagner himself. Two specimens each of *Ichthyosaurus teurirostris* and *I. communis*, in matrix, hang on the wall. Other Lyme Regis material lies in the cases.

Almost hidden in a far corner of the museum are two femurs, the pelvis, and first three tail vertebrae of *Apatosaurus* ["*Brontosaurus*"] *excelsus* (Marsh, 1879) (WFIS 4123), collected in 1874 for the Wagner Free Institute by Edward D. Cope, from the Morrison Formation (Late Jurassic) at Canon City, Colorado. For these specimens Cope was paid \$122.00.

Quietly displayed in Case 60B, next to "*Brontosaurus*," is the type of the saber-tooth cat *Smilodon floridanus* (Leidy, 1889)! This specimen (WFIS 4072) is the central part of a skull collected in Ocala, Florida; Leidy's description of it appeared in the *Transactions of the Wagner Free Institute*. A reconstructed whole skull, based on the type, a right upper carnassial (from the Florida Geological Survey), and a right upper canine (from the Texas Bureau of Economic Geology), is shown in a photograph displayed with the type. The two casts of the other parts are displayed in Case 79B, toward the other end of the hall. [Webb (1974) discussed in some detail the synonymization of *Smilodon floridanus* with the more well-known, but taxonomically junior, *S. californicus* Bovard (1907). Kurtén & Anderson (1980, p. 186), without discussion, treated *S. californicus* and *S. floridanus* both as junior synonyms of *S. fatalis* (Leidy, 1868).]

Acknowledgements

We wish extend our appreciation to Dr. Donald Baird (Princeton University), John Graham (Wagner Free Institute of Science), David C. Parris and William B. Gallagher (New Jersey State Museum), William Altimari, and Stephen Farrington for their input on the history behind this paleontological pilgrimage.

References Cited

- COPE, Edward D. 1884. *The Vertebrata of the Tertiary formations of the West. Book I. Report of the United States Geological Survey of the Territories*, Vol. 3, xxxv + 1009 pp., 134 pls.
- GILLETTE, David D., & Edwin H. COLBERT. 1976. Catalogue of type specimens of fossils vertebrates; Academy of Natural Sciences, Philadelphia. Part II: Terrestrial mammals. *Academy of Natural Sciences of Philadelphia, Proceedings*, 128(2):25-28.
- HOWARD, Robert West. 1975. *The dawnseekers; the first history of American paleontology*. New York: Harcourt Brace Jovanovich, 314 pp.
- JEFFERSON, Thomas. 1799. A memoir on the discovery of certain bones of a quadruped of the clawed kind in the western parts of Virginia. *American Philosophical Society, Transactions*, 4:246-260 [read to the Society March 10, 1797].
- KURTÉN, Björn, & Elaine ANDERSON. 1980. *Pleistocene mammals of North America*. New York: Columbia University Press, 442 pp.

- LEIDY, Joseph. 1873. *Contributions to the extinct vertebrate fauna of the Western Territories*. Report of the United States Geological Survey of the Territories, Vol. 1, pp. 14-358.
- . 1889. Description of some mammalian remains from a rock crevice in Florida. *Wagner Free Institute of Science, Transactions*, 2:13-17.
- NELSON, Clifford M., Mary C. RABBITT, & Fritiof M. FRYXELL. 1981. Ferdinand Vandever Hayden: The U.S. Geological Survey years, 1879-1886. *American Philosophical Society, Proceedings*, 125(3):238-243.
- OSBORN, Henry Fairfield. 1924. *Impressions of great naturalists*. New York: Charles Scribner's Sons, 216 pp.
- . 1931. *Cope: Master naturalist*. Princeton: Princeton University Press, 740 pp.
- PEALE, Rembrandt. 1803. *Historical disquisition on the Mammoth, or, Great American Incognitum, an extinct, immense, carnivorous animal, whose fossil remains have been found in North America*. London: C. Mercier, 91 pp.
- WAGNER FREE INSTITUTE OF SCIENCE. History. In: *Annual announcement of lecture courses*.
- WEBB, S. David. 1974. The status of *Smilodon* in the Florida Pleistocene. In: S. David Webb (ed.), *Pleistocene mammals of Florida*. Gainesville: The University Presses of Florida, pp. 149-153.
- WISTAR, C. 1799. A description of the bones deposited, by the President, in the Museum of the Society, and represented in the annexed plates. *American Philosophical Society, Transactions*, 4:526-531, Pls. 1, 2.

Catalogues of Type Fossils in the Academy of Natural Sciences

GILLETTE, David D., et al. 1975-1978. Catalogue of type specimens of fossil vertebrates, Academy of Natural Sciences, Philadelphia.

Part I: Marine mammals. David D. Gillette (1975). *Academy of Natural Sciences of Philadelphia, Proceedings [PANSP]*, 127(8):63-66.

Part II: Terrestrial mammals. David D. Gillette & Edwin H. Colbert (1976). *PANSP*, 128(2):25-28.

Part III: Birds. Storrs L. Olson & David D. Gillette (1978). *PANSP*, 129(7):99-100.

Part IV: Reptilia, Amphibia, and tracks. David D. Gillette (1978). *PANSP*, 129(8):101-111.

Part V: Fishes. David D. Gillette & Earl A. Shapiro (1978). *PANSP*, 129(9):113-123.

Part VI: Index, additions, and corrections. David D. Gillette (1978). *PANSP*, 129(12):203-211.

RICHARDS, Horace G. 1968. *Catalogue of invertebrate fossil types at the Academy of Natural Sciences of Philadelphia*. Academy of Natural Sciences of Philadelphia, Special Publication 8, 222 pp.

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